

Application No. 10/517,864  
Amtd. Date: January 22, 2008  
In Reply to Office Action of August 22, 2007  
Attorney Docket No. 4385-045796

**AMENDMENTS TO THE CLAIMS**

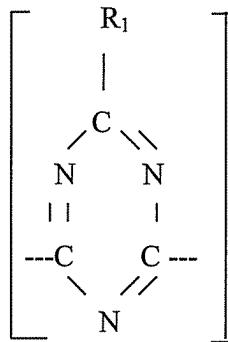
This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims**

Claims 1-21 (Cancelled).

Claim 22 (Currently Amended): Amino resin moulding materials for products with improved flexibility comprising mixtures of meltable 20 to 1000 nuclei polytriazine ethers,

wherein polytriazine ethers are prepared from precondensates of melamine and formaldehyde having a molar ratio of melamine/formaldehyde of 1:2.5 to 1:3.5, the polytriazine ethers comprising triazine segments according to the formula



wherein

R<sub>1</sub> = -NH<sub>2</sub>, -NH-CHR<sub>2</sub>-O-R<sub>3</sub>, -NH-CHR<sub>2</sub>-O-R<sub>4</sub>-OH, -OH, phthalimido-, succinimido-, -NH-CHR<sub>2</sub>-O-R<sub>4</sub>-O-CHR<sub>2</sub>-NH-, -NH-CHR<sub>2</sub>-NH-, -NH-CHR<sub>2</sub>-O-CHR<sub>2</sub>-NH-,

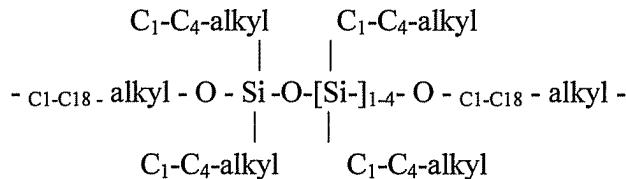
R<sub>2</sub> = H, C<sub>1</sub>-C<sub>7</sub> - alkyl;

R<sub>3</sub> = C<sub>1</sub>-C<sub>18</sub> - alkyl, H;

R<sub>4</sub> = C<sub>2</sub>-C<sub>18</sub>-alkylene, -CH(CH<sub>3</sub>)-CH<sub>2</sub>-O-C<sub>2</sub>-C<sub>12</sub>-alkylene-O-CH<sub>2</sub>-CH(CH<sub>3</sub>)-,

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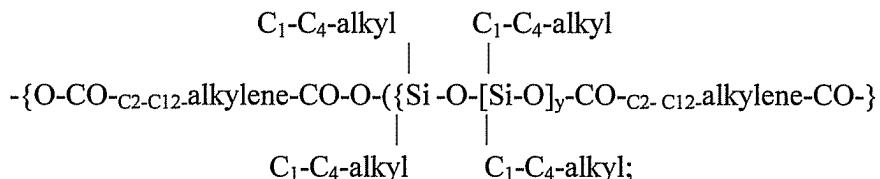
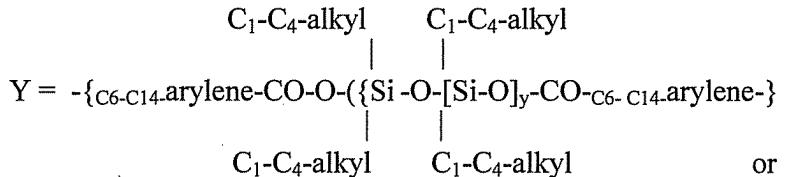
-CH(CH<sub>3</sub>)-CH<sub>2</sub>-O-C<sub>2</sub>-C<sub>12</sub>-arylene-O-CH<sub>2</sub>-CH(CH<sub>3</sub>)-,  
-[CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>]<sub>n</sub> -, -[CH<sub>2</sub>-CH(CH<sub>3</sub>)-O-CH<sub>2</sub>-CH(CH<sub>3</sub>)]<sub>n</sub> -, -[-O-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-]<sub>n</sub>-,  
-[(CH<sub>2</sub>)<sub>2-8</sub>-O-CO-C<sub>6</sub>-C<sub>14</sub>.arylen-CO-O-(CH<sub>2</sub>)<sub>2-8</sub>-]<sub>n</sub> -,  
-[(CH<sub>2</sub>)<sub>2-8</sub>-O-CO-C<sub>2</sub>-C<sub>12</sub>.alkylen-CO-O-(CH<sub>2</sub>)<sub>2-8</sub>-]<sub>n</sub> -,  
wherein n = 1 ~~to~~ bis to 200;  
- siloxane groups containing sequences of the type



- siloxane groups containing polyester sequences of the type -[(X)<sub>r</sub>-O-CO-(Y)<sub>s</sub>-CO-O-(X)<sub>r</sub>]- ,

wherein

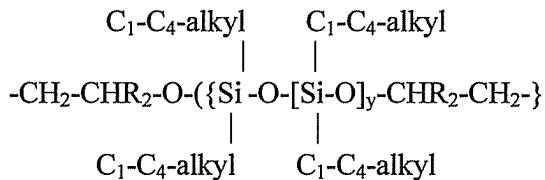
X = {(CH<sub>2</sub>)<sub>2-8</sub>-O-CO-C<sub>6</sub>-C<sub>14</sub>.arylene-CO-O-(CH<sub>2</sub>)<sub>2-8</sub>-} or  
-{(CH<sub>2</sub>)<sub>2-8</sub>-O-CO-C<sub>2</sub>-C<sub>12</sub>.alkylen-CO-O-(CH<sub>2</sub>)<sub>2-8</sub>-};



r = 1 to 70; s = 1 to 70 and y = 3 to 50;

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- siloxane groups containing polyether sequences of the type



wherein R<sub>2</sub> = H; C<sub>1</sub>-C<sub>4</sub>-alkyl and y = 3 to 50;

- sequences based on alkylene oxide adducts of melamine of the type  
2-amino-4,6-di-C<sub>2</sub>-C<sub>4</sub>-alkylene-amino-1,3,5-triazine sequences:

- phenolic ether sequences based on bivalent phenols and C<sub>2</sub>-C<sub>8</sub> diols of the type  
-C<sub>2</sub>-C<sub>8</sub>-alkylene-O-C<sub>6</sub>-C<sub>18</sub>-arylene-O-C<sub>2</sub>-C<sub>8</sub>-alkylene sequences;

are combined through bridging members -NH-CHR<sub>2</sub>-O-R<sub>4</sub>-O-CHR<sub>2</sub>-NH- and -NH-CHR<sub>2</sub>-NH- and optionally -NH-CHR<sub>2</sub>-O-CHR<sub>2</sub>-NH- to 20 to 1000 nuclei polytriazine ethers with linear and/or branched structure,

wherein the polytriazine ethers the molar ratio of the substituents is R<sub>3</sub> : R<sub>4</sub> = 20 : 1 to 1 : 20,

the proportion of the combinations of the triazine segments through bridging members -NH-CHR<sub>3</sub>-O-R<sub>4</sub>-O-CHR<sub>3</sub>-NH- is 5 to 95 mol%,

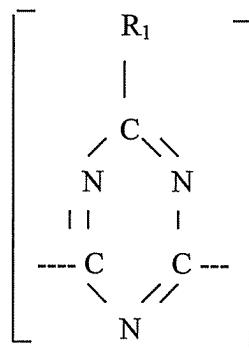
and wherein the amino resin moulding materials optionally contain up to 75 mass% fillers and / or absorber materials, up to 50 mass% further reactive polymers selected from the group consisting of ethylene copolymers, maleic acid anhydride copolymers, modified maleic acid anhydride copolymers, poly(meth)acrylates, polyamides, polyesters and polyurethanes, up to 20 mass% diols according to the formula HO-R<sub>4</sub>-OH and up to 5 mass%, stabilisers, UV absorbers, and/or hardening agents.

Claim 23 (Previously Presented): The amino resin moulding materials according to claim 22, wherein the polytriazine ethers are 30 to 300 nuclei polytriazine ethers.

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Claim 24 (Previously Presented): The amino resin moulding materials according to claim 22, wherein the polytriazine ethers in the mixtures are polytriazine ethers with R<sub>2</sub> = H.

Claim 25 (Currently Amended): A process for producing amino resin moulding materials comprising mixtures of meltable 20 to 1000 nuclei polytriazine ethers, wherein polytriazine ethers comprising triazine segments according to the formula



wherein

R<sub>1</sub> = -NH<sub>2</sub>, -NH-CHR<sub>2</sub>-O-R<sub>3</sub>, -NH-CHR<sub>2</sub>-O-R<sub>4</sub>-OH, -OH, phthalimido-, succinimido-, -NH-CHR<sub>2</sub>-O-R<sub>4</sub>-O-CHR<sub>2</sub>-NH-, -NH-CHR<sub>2</sub>-NH-, -NH-CHR<sub>2</sub>-O-CHR<sub>2</sub>-NH-,

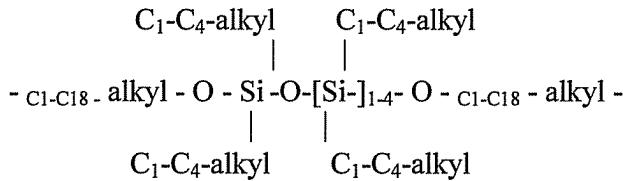
R<sub>2</sub> = H, C<sub>1</sub>-C<sub>7</sub> - alkyl;

R<sub>3</sub> = C<sub>1</sub>-C<sub>18</sub> - alkyl, H;

R<sub>4</sub> = C<sub>2</sub>-C<sub>18</sub>-alkylene, -CH(CH<sub>3</sub>)-CH<sub>2</sub>-O-C<sub>2</sub>-C<sub>12</sub>-alkylene-O-CH<sub>2</sub>-CH(CH<sub>3</sub>)-, -CH(CH<sub>3</sub>)-CH<sub>2</sub>-O-C<sub>2</sub>-C<sub>12</sub>-arylene-O-CH<sub>2</sub>-CH(CH<sub>3</sub>)-, -[CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>]<sub>n</sub> -, -[CH<sub>2</sub>-CH(CH<sub>3</sub>)-O-CH<sub>2</sub>-CH(CH<sub>3</sub>)]<sub>n</sub> -, -[-O-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-]<sub>n</sub> -, -[(CH<sub>2</sub>)<sub>2-8</sub>-O-CO-C<sub>6</sub>-C<sub>14</sub>.arylene-CO-O-(CH<sub>2</sub>)<sub>2-8</sub>-]<sub>n</sub> -, -[(CH<sub>2</sub>)<sub>2-8</sub>-O-CO-C<sub>2</sub>-C<sub>12</sub>.alkylene-CO-O-(CH<sub>2</sub>)<sub>2-8</sub>-]<sub>n</sub> -, wherein n = 1 to 200;

- siloxane groups containing sequences of the type

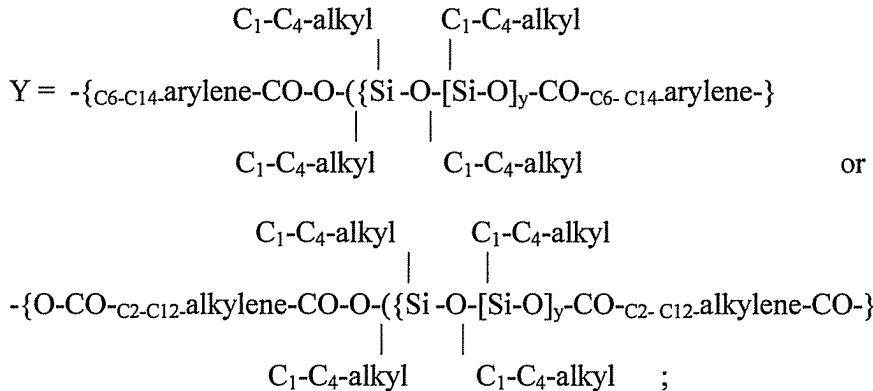
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- siloxane groups containing polyester sequences of the type  $-(X)_r\text{-O-CO-(Y)}_s\text{-CO-O-}(X)_r]-$ ,

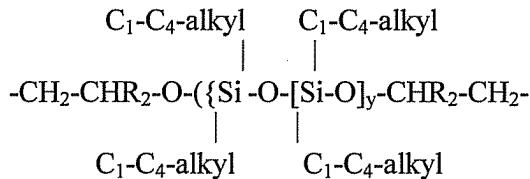
wherein

$X = \{(CH_2)_{2-8}\text{-O-CO-C}_6\text{-C}_{14}\text{-arylene-CO-O-(CH}_2\text{)}_{2-8}\}$  or  
 $\{-(CH_2)_{2-8}\text{-O-CO-C}_2\text{-C}_{12}\text{-alkylene-CO-O-(CH}_2\text{)}_{2-8}\};$



$r = 1$  to  $70$ ;  $s = 1$  to  $70$  and  $y = 3$  to  $50$ ;

- siloxane groups containing polyether sequences of the type



wherein  $R_2 = H$ ;  $C_1\text{-C}_4\text{-alkyl}$  and  $y = 3$  to  $50$ ;

- sequences based on alkylene oxide adducts of melamine of the type  
 $2\text{-amino-4,6-di-C}_2\text{-C}_4\text{-alkylene-amino-1,3,5-triazine sequences:}$

- phenolic ether sequences based on bivalent phenols and  $C_2\text{-C}_8$  diols of the type  
 $\text{-C}_2\text{-C}_8\text{-alkylene-O-C}_6\text{-C}_{18}\text{-arylene-O-C}_2\text{-C}_8\text{-alkylene sequences;}$

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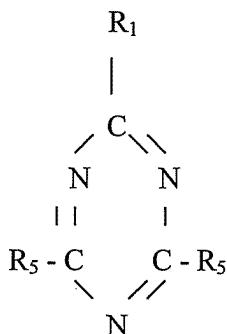
are combined through bridging members -NH-CHR<sub>2</sub>-O-R<sub>4</sub>-O-CHR<sub>2</sub>-NH- and -NH-CHR<sub>2</sub>-NH- and optionally -NH-CHR<sub>2</sub>-O-CHR<sub>2</sub>-NH- to 20 to 1000 nuclei polytriazine ethers with linear and/or branched structure,

wherein in the polytriazine ethers the molar ratio of the substituents is R<sub>3</sub> : R<sub>4</sub> = 20 : 1 to 1 : 20,

the proportion of the combinations of the triazine segments through bridging members -NH-CHR<sub>3</sub>-O-R<sub>4</sub>-O-CHR<sub>3</sub>-NH- is 5 to 95 mol%,

and wherein the amino resin moulding materials can contain up to 75 mass% fillers, up to 50 mass% further reactive polymers of the type ethylene copolymers, maleic acid anhydride copolymers, modified maleic acid anhydride copolymers, poly(meth)acrylates, polyamides, polyesters and/or polyurethanes, up to 20 mass% diols of the type HO-R<sub>4</sub>-OH, and up to 2 mass% stabilisers, UV absorbers and/or auxiliary substances,

comprising the steps of etherifying precondensates of C<sub>1</sub>-C<sub>8</sub> aldehydes and triazine derivatives of the structure



R<sub>1</sub> = -NH<sub>2</sub>, -NH-CHR<sub>2</sub>-OH, -OH, phthalimido-, succinimido-,

R<sub>2</sub> = H, C<sub>1</sub>-C<sub>7</sub> - alkyl;

R<sub>5</sub> = -NH-CHR<sub>2</sub>-OH

through conversion with C<sub>1</sub>-C<sub>8</sub> alcohols in neutral to weak acid medium at 25 to 150°C and 0.1 to 5 bars; conditioning the substituted triazine derivatives with standing times of 5 to 15 min at 150 to 250°C and 0.1 to 15 bars; whereas salts that have been formed can be separated separating any salts that are formed while maintaining a pH value of 7 to 10; wherein by dissolving the melt of the amino triazine ethers at 70 to 150°C are present in a

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70 to 150 mass%, (in relation to the amino triazine ethers) of C<sub>3</sub> to C<sub>6</sub> alcohols which are dissolved; separating insoluble proportions off after cooling to 15 to 40°C, evaporating the added C<sub>3</sub> to C<sub>6</sub> alcohols at 70 to 140°C to a remaining content of 5 to 20 mass% to provide C<sub>1</sub>-C<sub>8</sub>-alkyl-oxa-C<sub>1</sub>-C<sub>8</sub>-alkylene-amino- substituted triazine derivatives;

- reacting the C<sub>1</sub>-C<sub>8</sub>-alkyl-oxa-C<sub>1</sub>-C<sub>8</sub>-alkylene-amino- substituted triazine derivatives through partial re-etherification with diols of the type HO-R<sub>4</sub>-OH and/or partial conversion with bisepoxides of the type H<sub>2</sub>C - CH - R<sub>6</sub> - CH - CH<sub>2</sub>

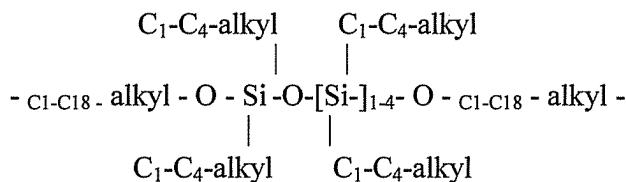


wherein R<sub>4</sub> is selected from the group consisting of

C<sub>2</sub>-C<sub>18</sub>-alkylene, -[CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>]<sub>n</sub>-,  
-[CH<sub>2</sub>-CH(CH<sub>3</sub>)-O-CH<sub>2</sub>-CH(CH<sub>3</sub>)]<sub>n</sub>-,  
-[-O-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-]n-,  
-[(CH<sub>2</sub>)<sub>2-8</sub>-O-CO-C<sub>6</sub>-C<sub>14</sub>-arylene-CO-O-(CH<sub>2</sub>)<sub>2-8</sub>]<sub>n</sub>-,  
-[(CH<sub>2</sub>)<sub>2-8</sub>-O-CO-C<sub>2</sub>-C<sub>12</sub>-alkylene-CO-O-(CH<sub>2</sub>)<sub>2-8</sub>]<sub>n</sub>-,

wherein n = 1 to 200;

- siloxane groups containing sequences of the type

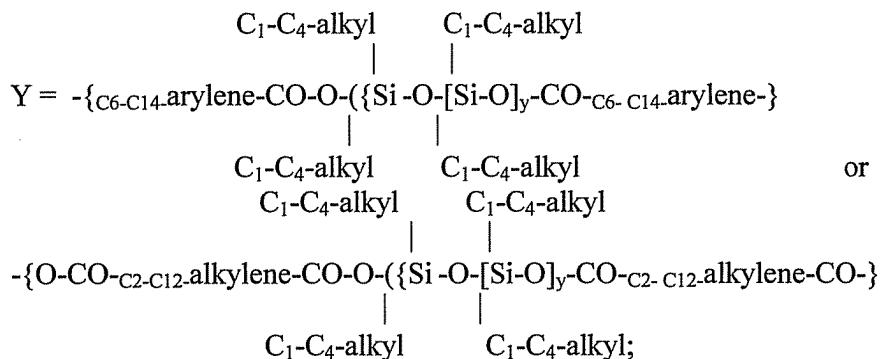


- siloxane groups containing polyester sequences of the type -[(X)<sub>r</sub>-O-CO-(Y)<sub>s</sub>-CO-O-(X)<sub>r</sub>]- ,

wherein

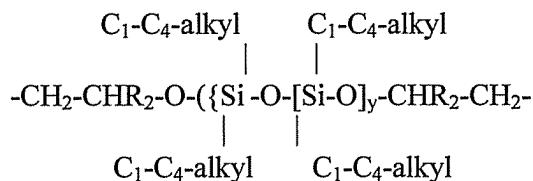
X = {(CH<sub>2</sub>)<sub>2-8</sub>-O-CO-C<sub>6</sub>-C<sub>14</sub>-arylene-CO-O-(CH<sub>2</sub>)<sub>2-8</sub>-} or  
-{(CH<sub>2</sub>)<sub>2-8</sub>-O-CO-C<sub>2</sub>-C<sub>12</sub>-alkylene-CO-O-(CH<sub>2</sub>)<sub>2-8</sub>-};

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$r = 1$  to  $70$ ;  $s = 1$  to  $70$  and  $y = 3$  to  $50$ ;

- siloxane groups containing polyether sequences of the type



wherein  $R_2 = H$ ;  $C_1\text{-C}_4\text{-alkyl}$  and  $y = 3$  to  $50$ ; and

- sequences based on alkylene oxide adducts of melamine of the type  
 2-amino-4,6-di- $C_2\text{-C}_4$ alkylene-amino-1,3,5-triazine sequences:

- phenolic ether sequences based on bivalent phenols and  $C_2\text{-C}_8$  diols of the type  
 $-C_2\text{-C}_8\text{-alkylene-O-C}_6\text{-C}_{18}\text{-arylene-O-C}_2\text{-C}_8\text{-alkylene}$  sequences;

and  $R_6 = -\text{CH}_2\text{-O-C}_2\text{-C}_{12}\text{-alkylene-O-CH}_2\text{-}$ ,  $-\text{CH}_2\text{-O-C}_6\text{-C}_{14}\text{-arylene-O-CH}_2\text{-}$ ,

to provide a reaction product containing 70 mass%  $C_5\text{-C}_{18}$  alcohols,

converted into the corresponding substituted triazine derivatives with standing times of 1 to 60 min with distilling of  $C_1\text{-C}_8$  alcohols at 60 to  $250^\circ\text{C}/0.05$  to 1 bar wherein through the molar ratio  $C_1\text{-C}_8\text{-alkyl-oxa-C}_1\text{-C}_8\text{-alkylene-amino}$  groups / diol used and/or bisepoxide used of 20 : 1 to 1.1 : 1 a partial re-etherification of the  $C_1\text{-C}_8\text{-alkyl}$  ether groups of the  $C_1\text{-C}_8\text{-alkyl-oxa-C}_1\text{-C}_8$  alkylene amino triazines is achieved,

- further condensing the amino triazine ethers to polytriazine ethers in the melt obtained which contains etherified amino triazine derivatives and proportions of polytriazine ethers and unconverted or unseparated diol and furthermore can contain C<sub>5</sub>-C<sub>18</sub> alcohols is dosed into a kneader, converted with a standing time of 2 to 12 min at 140 to 220°C with degassing and the polytriazine ethers are removed and granulated wherein the melt, before dosing into a kneader, are optionally subjected to tempering of 20 to 120 min at 70 to 140°C, up to 75 mass% fillers, further reactive polymers selected from the group consisting of ethylene copolymers, maleic acid anhydride copolymers, modified maleic acid anhydride copolymers, poly(meth)acrylates, polyamides, polyesters and polyurethanes and up to 2 mass%, each in relation to the polytriazine ethers, stabilisers, and/or UV absorbers are added to the melt and optionally subjecting the melt to a melt filtration before removal.

Claim 26 (Currently Amended): The process for the production of amino resin moulding materials according to claim 25, wherein as ionic catalysts and/or for the neutralisation of the reaction deposit a inorganic or organic acids, bases, ion exchanging resins and/or acid zeolites are used.

Claim 27 (Previously Presented): The process for the production of amino resin moulding materials according to claim 25, wherein the etherification of the precondensates with C<sub>1</sub>-C<sub>8</sub> alcohols is performed in the presence of 10 to 300 mass%, in relation to the dry substance of the precondensates used, molecular sieving.

Claim 28 (Previously Presented): The process for the production of amino resin moulding materials according to claim 25, wherein the partial re-etherification of the C<sub>1</sub>-C<sub>8</sub>-alkyl-oxa-C<sub>1</sub>-C<sub>8</sub>-alkylene-amino-substituted triazine derivatives is performed catalytically in the presence of strong acids at temperatures in the range of 100-175°C.

Claim 29 (Currently Amended): The process for the production of amino resin moulding materials according to claim 25, wherein the process of partial re-etherisation

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re-etherification of the C<sub>1</sub>-C<sub>8</sub>-alkyl-oxa-C<sub>1</sub>-C<sub>8</sub>-alkylene-amino-substituted triazine derivatives is performed thermally at temperatures in the range of 150-250°C.

Claim 30 (Previously Presented): The process for the production of amino resin moulding materials according to claim 25, wherein the process for the further condensation of the amino triazine ethers to polytriazine ethers mixtures of products of different initial products or mixtures of products C<sub>1</sub>-C<sub>8</sub>-alkyl-oxa-C<sub>1</sub>-C<sub>8</sub>-alkylene-amino-substituted triazine derivatives which have not been re-etherified are used.

Claim 31 (Previously Presented): The process for the production of amino resin moulding materials according to claim 25, wherein all steps of the process are performed one after the other in a reaction installation.

Claim 32 (Previously Presented): Melt adhesives, plates, pipes, profiles, injection moulded components, fibres, foams, impregnation resins, paint resins or laminating resins, or micro-capsules comprising the amino resin moulding materials according to claim 23.

Claim 33 (Previously Presented): Amino resin products with improved flexibility, comprising the amino resin moulding materials according to claim 22.

Claim 34 (Previously Presented): The amino resin products according to claim 33, wherein the amino resin products are semifinished products produced through melt processing, wherein the products are selected from the group consisting of plates, pipes, profiles, coatings, foams, fibres, forming substances, injection moulded components, and components produced from fibres according to winding, braiding or pultrusion technology and subsequent resin impregnation.

Claim 35 (Previously Presented): Amino resin products according to claim 33, further comprising fillers and adsorber materials selected from the group consisting of Al<sub>2</sub>O<sub>3</sub>, Al(OH)<sub>3</sub>, SiO<sub>2</sub>, barium sulphate, calcium carbonate, glass balls, silica, mica, quartz

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dust, slate dust, micro hollow spheres, carbon black, talc, layer silicates, molecular sieves, stone dust, wood flour, cellulose, cellulose derivatives, and combinations thereof.

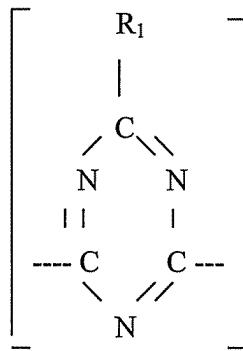
**Claim 36 (Previously Presented):** The amino resin products according to claim 35, wherein the silicates are selected from the group consisting of bentonite, kaolinite, muscovite, hectorite, fluorohectorite, kanemite, revdite, grumantite, Illerite, saponite, beidelite, nontronite, stevensite, laponite, taneolite, vermiculite, halloysite, volkonskoite, magadite, rectorite, kenyaite, sauconite, boron fluorophlogopite and synthetic smectites.

**Claim 37 (Previously Presented):** The amino products according to claim 36, wherein the silicates are adsorber material layer silicates selected from the group consisting of montmorillonite, bentonite, hectorite, molecular sieves of the types A, X, Y, or 5A, adsorbers with a silicon base, micro hollow spheres, cellulose and cellulose derivatives.

**Claim 38 (Previously Presented):** The amino resin products according to claim 33, further comprising reinforcement fibres selected from the group consisting of glass fibres, carbon fibres, cellulose fibres, flax, jute, kenaf, wood fibres, polyacryl nitrile fibres, polyvinyl alcohol fibres, polyvinyl acetate fibres, polypropylene fibres, polyester fibres and polyamide fibres.

**Claim 39 (Previously Presented):** A process for producing amino resin products with improved flexibility, comprising melting amino resin moulding materials comprising mixtures of meltable 20 to 1000 nuclei polytriazine ethers,

wherein in the polytriazine ethers the triazine segments



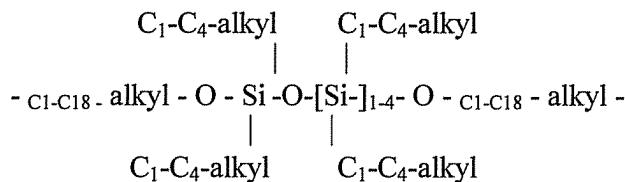
$R_1 = -NH_2, -NH-CHR_2-O-R_3, -NH-CHR_2-O-R_4-OH, -OH, phthalimido-, succinimido-, -NH-CHR_2-O-R_4-O-CHR_2-NH-, -NH-CHR_2-NH-, -NH-CHR_2-O-CHR_2-NH-,$

$R_2 = H, C_1-C_7 - alkyl;$

$R_3 = C_1-C_{18} - alkyl, H;$

$R_4 = C_2-C_{18}-alkylene, -CH(CH_3)-CH_2-O-C_2-C_{12}-alkylene-O-CH_2-CH(CH_3)-,$   
 $-CH(CH_3)-CH_2-O-C_2-C_{12}-arylene-O-CH_2-CH(CH_3)-,$   
 $-[CH_2-CH_2-O-CH_2-CH_2]_n -, -[CH_2-CH(CH_3)-O-CH_2-CH(CH_3)]_n -, -[-O-CH_2-CH_2-CH_2-$   
 $CH_2-]_n -,$   
 $-[(CH_2)_{2-8}-O-CO-C_6-C_{14}-arylene-CO-O-(CH_2)_{2-8}-]_n -,$   
 $-[(CH_2)_{2-8}-O-CO-C_2-C_{12}-alkylene-CO-O-(CH_2)_{2-8}-]_n -,$   
 wherein n = 1 to 200;

- siloxane groups containing sequences of the type

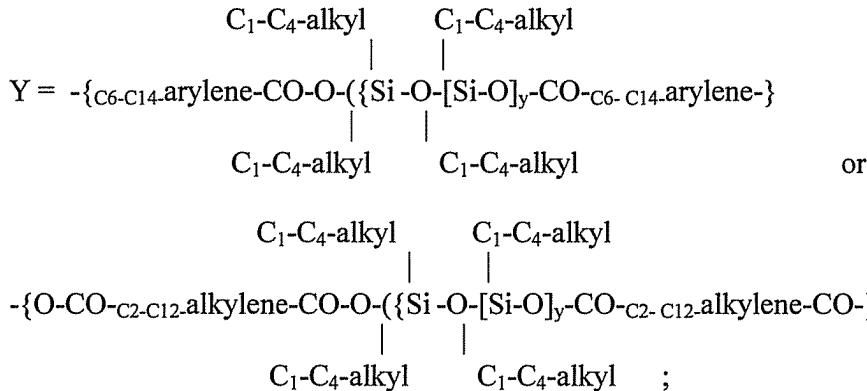


- siloxane groups containing polyester sequences of the type  $-(X)_r-O-CO-(Y)_s-CO-O-(X)_r]-,$

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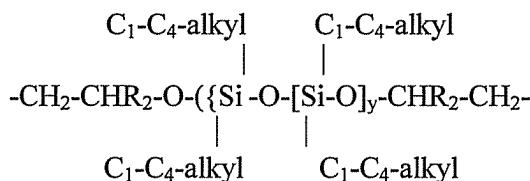
wherein

$X = \{(CH_2)_{2-8}-O-CO-C_6-C_{14}.arylene-CO-O-(CH_2)_{2-8}-\}$  or  
 $\{-(CH_2)_{2-8}-O-CO-C_2-C_{12}.alkylene-CO-O-(CH_2)_{2-8}-\};$



$r = 1$  to  $70$ ;  $s = 1$  to  $70$  and  $y = 3$  to  $50$ ;

- siloxane groups containing polyether sequences of the type



wherein  $R_2 = H$ ;  $C_1-C_4-alkyl$  and  $y = 3$  to  $50$ ;

- sequences based on alkylene oxide adducts of melamine of the type

2-amino-4,6-di- $C_2-C_4$ .alkylene-amino-1,3,5-triazine sequences:

- phenolic ether sequences based on bivalent phenols and  $C_2-C_8$  diols of the type  
 $-C_2-C_8.alkylene-O-C_6-C_{18}.arylene-O-C_2-C_8-alkylene$  sequences;

are combined through bridging members  $-NH-CHR_2-O-R_4-O-CHR_2-NH-$  und  $-NH-CHR_2-NH-$  and optionally  $-NH-CHR_2-O-CHR_2-NH-$  to 20 to 1000 nuclei polytriazine ethers with linear and/or branched structure,

wherein in the polytriazine ethers the molar ratio of the substituents is  $R_3 : R_4 = 20 : 1$  to  $1 : 20$ ,

the proportion of the combinations of the triazine segments through bridging members - NH-CHR<sub>3</sub>-O-R<sub>4</sub>-O-CHR<sub>3</sub>-NH- is 5 to 95 mol%,  
and wherein the amino resin moulding materials can contain up to 75 mass% fillers and/or adsorber materials, up to 50 mass% further reactive polymers of the type ethylene copolymers, maleic acid anhydride copolymers, modified, maleic acid anhydride copolymers, poly(meth)acrylates, polyamides, polyesters and/or polyurethanes, up to 20 mass% diols of the type HO - R<sub>4</sub> - OH, and up to 2 mass% stabilisers, UV absorbers, hardening agents and/or auxiliary substances,  
in continuous kneaders at mass temperatures of 105 to 260°C and standing times of 2 to 12 min and with hardening of the polytriazine ethers according to usual processing methods for thermoresin polymers

A) placing as a melt on a smoothing device and taken out as a plate by means of conveyor belts and cut or sealed on surface guides made from metallised films, synthetic films, paper guides or textile guides and removed and processed as multicomponent composites,

or

B) taking out via a profiled opening and removed, cut and processed as a profile or plate material,

or

C) taking out via an annular opening, removed with pressing of air as a pipe, removed, cut and processed,

or

D) after dosing of blowing agents removed taking out via a wide slot opening and removed as a foamed plate material,

or

E) taking out via the wide slot opening of a pipe coating installation and sealed in a fusible manner onto the rotating pipe,

or

F) processing into injection moulded components in injection moulding machines, having three zone worms with a worm length of 18 to 24 D, high injection speeds and with tool

temperatures of 70 to 150°C, or

G) extruding in melt spinning installations by means of melt pump through the capillary tool into the blow shaft and taken out as threads or after the melt-blow process separated off as fibres or after the rotation spinning process taken out as a melt into a shear field chamber with organic dispersing agents with the formation of fibre fibrides and further processed in subsequent devices, or

K) melt impregnating component blanks produced according to the winding process, braiding process or pultrusion process,

and optionally for complete hardening the products subjecting to subsequent thermal processing at temperatures of 180 to 280°C and standing times of 20 to 120 min.

Claim 40 (Previously Presented): The process for producing amino resin products according to claim 39, wherein the polytriazine ethers contained in the amino resin moulding materials used are 30 to 300 nuclei polytriazine ethers.

Claim 41 (Previously Presented): The process for producing amino resin products with improved flexibility according to claim 39, wherein the polytriazine ethers contained in the amino resin moulding materials used are polytriazine ethers with R<sub>2</sub> = H.

Claim 42 (Previously Presented): The process for producing amino resin products with improved flexibility according to claim 39, wherein the hardening agents contained in the amino resin moulding materials used are weak acids selected from the group consisting of:

- blocked sulphonic acids,
- aliphatic C<sub>4</sub>-C<sub>18</sub> carbonic acids,
- alkali salts or ammonium salts of phosphoric acid,
- C<sub>1</sub>-C<sub>12</sub> alkyl esters or C<sub>2</sub>-C<sub>8</sub> hydroxyalkyl esters of C<sub>6</sub>-C<sub>14</sub> aromatic carbon acids or anorganic acids,

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- salts of melamine or guanamines with C<sub>1</sub>-18 aliphatic carbonic acids,
- anhydrides, semi-esters or semi-amides of C<sub>4</sub>-C<sub>20</sub> dicarbonic acids,
- semi-esters or semi-amides of copolymers of ethylenically unsaturated C<sub>4</sub>-C<sub>20</sub> dicarbonic acid anhydrides and ethylenically unsaturated monomers of the type C<sub>2</sub>-C<sub>20</sub> olefines and/or C<sub>8</sub>-C<sub>20</sub> vinyl aromates,
- and
- salts of C<sub>1</sub>-C<sub>12</sub>-alkyl amines or alkanol amines with C<sub>1</sub>-C<sub>18</sub> aliphatic, C<sub>6</sub>-C<sub>14</sub>-aromatic or alkyl aromatic carbonic acids as well as anorganic acids of the type hydrochloric acid, sulphuric acid or phosphoric acid.

Claim 43 (Currently Amended): The process for producing amino resin products according to claim 39, wherein the production of fibre fibrdes from the amino resin moulding materials is effected through

- introducing the melt via entry openings at melt temperatures of 160 to 220°C into a shear field chamber which contains high boiling organic dispersion agent heated to 150 to 210°C, preferably paraffin oil or engine oil, wherein acid gases, preferably chlorohydrogen or sulphur dioxide are introduced into the shear field chamber, and wherein the melt stream leaving the entry opening is extended and divided through the oil whirled about by the rotor with the formation of fibres,
- conveying the dispersion of the fibre fibrdes formed in organic dispersion agent into a sieve separator with simultaneous extraction of the high boiling dispersion agent with low boiling hydrocarbons, preferably hexane or heptane,
- removing the fibre fibrde short fibre fleece and optionally subsequent thermal treating of the short fibre fleece at temperatures of 180 to 210°C and standing times of 40 to 120 min.

Claim 44 (Previously Presented): Foam plates as isolation components, in the form of plates as panelling elements, in the form of pipes and hollow profiles in ventilation technology, in the form of injection moulded components as functional components, and fibres for the production of electro-isolation papers, fire protection clothing, clothing for high

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working temperatures, fire protection blankets, filter fleeces, felts for paper machines and vehicle and machine isolation covers, or containers or profiles according to the winding, braiding or pultrusion process comprising the amino resin products according to claim 33.